

WHAT IS CLAIMED IS:

- 1 1. An improved distributed Bragg reflector comprising:
2 a first portion comprising a first phase;
3 at least a second portion spaced apart from said first portion comprising a
4 second phase, said phase being different from the first phase.
5
- 1 2. The reflector of claim 1, wherein the second portion has a second phase
2 opposite that of said first phase of said first portion .
- 1 3. The reflector of claim 1, wherein said spaced apart first portion and second
2 portion are configured to maximize the coupling constant (κ) as evenly as possible across a
3 selected tuning range.
- 1 4. A method for configuring a selected grating distributed Bragg reflector for
2 use in a laser having an output within a specific region of bandwidth, the method comprising
3 the steps of:
4 a) selecting a preferred κ for at least one wavelength of the specific region of
5 the bandwidth that is to be used;
6 b) selecting a preferred tuning range for said reflector;
7 c) generating a sampling function that, when applied to the reflector, results
8 in the closest fit to the desired average κ with the smallest amount of variation within the
9 selected tuning range.
- 1 5. A method for configuring a selected grating distributed Bragg reflector for
2 use in a laser having an output comprising at least one wavelength within a specific region of
3 bandwidth, the method comprising the steps of:
4 a) selecting a preferred tuning range for said reflector;
5 b) determining an average κ for the at least one output wavelength of the
6 specific region of the bandwidth that is to be used;

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8 c) generating a sampling function that, when applied to the reflector, results
9 in the closest fit to the desired average K with the smallest amount of variation within the
10 preferred tuning range.

1 6. The method of claim 5, wherein the at least one wavelength is a plurality of
2 wavelengths.

1 7. The method of claim 5, further comprising the step of sampling the reflector
2 in accordance with the sampling function.

1 8. The method of claim 4, wherein the at least one wavelength is a plurality of
2 wavelengths.

1 9. The method of claim 4, wherein the at least one wavelength is a plurality of
2 wavelengths.

1 10. The method of claim 4, further comprising the step of sampling the reflector
2 in accordance with the sampling function.

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